

97. (New) An ink cartridge according to claim 1, wherein when the printer reads information from the ink cartridge, the printer accesses the ink quantity information storage area after accessing an other portion of the storage unit.

98. (New) An ink cartridge configured to be detachably mountable on a printer, comprising:

an ink reservoir for keeping ink; and

a non-volatile serial access memory being sequentially accessed from an access start position in synchronism with a clock signal, the memory having a first memory area for storing data not to be updated according to use of the ink cartridge and a second memory area for storing data to be updated according to use of the ink cartridge,

wherein the second memory area has a specific area for storing ink quantity data related to consumption of the ink, the specific area being located at a front end of the second memory area which is to be written first in writing data to the second memory area.

99. (New) An ink cartridge in accordance with claim 98, wherein the second memory area is located at a first half of an entire memory space of the non-volatile serial access memory.

100. (New) An ink cartridge configured to be detachably attached to an ink-jet printer, comprising:

an ink storage reservoir; and

a non-volatile serial access storage element that stores data, the storage element having;

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a first storage area for storing read-only data at a first address, and
a second storage area for storing rewritable data at a second
address, the second address being lower than the first address.

101. (New) An ink cartridge according to claim 100, wherein the second address being lower than the first address means that the second address is closer to a beginning of the storage device than the first address.

102. (New) An ink cartridge according to claim 100, wherein the rewritable data reflects a quantity of ink remaining in the ink storage reservoir.

103. (New) An ink cartridge according to claim 100, wherein the read-only data reflects at least one of a time at which the ink cartridge was unsealed, a version of the data stored, a type of ink contained in the ink storage reservoir, a time at which the ink cartridge was manufactured, a serial number of the ink cartridge, and an indication as to whether the ink cartridge is new or recycled.

104. (New) An ink cartridge according to claim 100, wherein a maximum amount of the first data that the first storage area can store is equal to a maximum amount of the second data that the second storage area can store.

105. (New) An ink cartridge according to claim 100, wherein at least one of the read-only data and the rewritable data comprises a plurality of data records, and the data records are sequentially arranged.

106. (New) An ink cartridge according to claim 100, wherein a first said data record has a first size and a second said data record has a second size, and the first and second sizes are different.

107. (New) An ink cartridge according to claim 100, wherein the rewritable data reflects an amount of ink consumption in the ink storage reservoir, said amount of ink consumption having an initial value in a range from zero to a predetermined value.

108. (New) A method of providing a plurality of data in an ink cartridge that is configured to be detachably mountable on a printer, the ink cartridge having a non-volatile serial access memory, comprising the steps of:

first, storing read-only data at a first address in the memory; and

second, storing rewritable data at a second address in the memory, wherein the second address is closer to a beginning of the storage device than the first address.

109. (New) A method according to claim 108, wherein the rewritable data reflects a quantity of ink contained in the ink cartridge.

110. (New) A method according to claim 108, wherein the read-only data reflects at least one of a time at which the ink cartridge was unsealed, a version of the data stored, a type of ink contained in the ink storage reservoir, a time at which the ink cartridge was manufactured, a serial number of the ink cartridge, and an indication as to whether the ink cartridge is new or recycled.

111. (New) A method according to claim 108, wherein a maximum amount of the read-only data that is stored is equal to a maximum amount of the rewritable data that is stored.

112. (New) A method according to claim 108, wherein at least one of the read-only data and the rewritable data comprises a plurality of data records, and the data records are sequentially arranged.

113. (New) A method according to claim 112, wherein a first said data record has a first size and a second said data record has a second size, and the first and second sizes are different.

114. (New) A method of retrieving data from an ink cartridge that is configured to be detachably mountable on a printer, the ink cartridge having a non-volatile serial access memory, the memory containing read-only data at a first address and rewritable data at a second address in the memory, wherein the second address is closer to a beginning of the storage device than the first address, comprising the step of:

reading the second data without reading the first data.--.

Amend claims 1, 15, 35, 45, 47, 72 and 73:

1. (Twice Amended) An ink cartridge configured to be detachably attached to a printer, said ink cartridge comprising:

an ink reservoir in which an ink used for printing is kept; and

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a storage unit storing specific information in a readable, writable, and non-volatile manner, wherein the specific information comprises an ink quantity-relating information relating to a quantity of ink kept in said ink reservoir,

wherein the storage unit is sequentially accessed in synchronism with a clock signal, and has an ink quantity information storage area storing the ink quantity-relating information, and wherein the ink quantity information storage area is located at a specific area accessed for rewriting first by said printer.

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15. (Twice Amended) An ink cartridge configured to be detachably attached to a printer, said ink cartridge comprising:

an ink reservoir in which an ink used for printing is kept; and

a storage unit storing specific information in a readable, writable, and non-volatile manner and being sequentially accessed in synchronism with a clock signal, said storage unit having a first storage area, in which a plurality of read only information is stored, and a second storage area, which is arranged at a location accessed for rewriting prior to the first storage area and in which rewritable information is stored,

wherein the specific information comprises information relating to a quantity of ink kept in said ink reservoir.

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35. (Twice Amended) A method of writing plural pieces of specific information into an ink cartridge, said ink cartridge being configured to be detachably attached to a printer and having a storage element, said method comprising the steps of:

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(a) providing the plural pieces of specific information that are to be written into said storage element by said printer, wherein the plural pieces of specific information comprises information relating to a quantity of ink kept in said ink cartridge; and

(b) rewriting the ink quantity-relating information into said storage element, preferentially over the other pieces of specific information.

45. (Twice Amended) A method of writing specific information into an ink cartridge, said ink cartridge being configured to be detachably attached to a printer and having a storage element, said method comprising the steps of:

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(a) providing the specific information that is to be written into said storage element by said printer, the specific information comprising information relating to a quantity of ink kept in said ink cartridge;

(b) rewriting the ink quantity-relating information into a plurality of ink quantity information memory divisions, which are included in said storage element; and

(c) writing write complete information into a write complete information storage area when the writing operation of the ink quantity-relating information into each of the ink quantity information memory divisions has been completed, wherein the write complete information storage area is provided corresponding to each of the ink quantity information memory divisions in said storage element.

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47. (Twice Amended) A method of writing specific information into an ink cartridge, said ink cartridge being configured to be detachably attached to a printer and having a storage element, said method comprising the steps of

(a) providing the specific information that is to be written into said storage element by said printer, the specific information comprising information relating to a quantity of ink kept in said ink cartridge;

(b) rewriting first ink quantity-relating information into a first ink quantity information memory division, which is included in said storage element;

(c) writing first write complete information into a first write complete information storage area when the writing operation of the first ink quantity-relating information into the first ink quantity information memory division has been completed, wherein the first write complete information storage area is provided corresponding to the first ink quantity information memory division in said storage element;

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(d) rewriting second ink quantity-relating information into a second ink quantity information memory division after the writing operation of the first write complete information into the first write complete information storage area has been completed, wherein the second ink quantity information memory division is included in said storage element; and

(e) writing second write complete information into a second write complete information storage area when the writing operation of the second ink quantity-relating information into the second ink quantity information memory division has been completed, wherein the second write complete information storage area is provided corresponding to the second ink quantity information memory division in said storage element.

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72. (Twice Amended) A storage device mounted on an ink cartridge, which is configured to be detachably attached to a printer, said storage device comprising: